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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/668,243	09/22/2000	Ming Lu	Lu 7-1	9851

7590 01/07/2005
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EXAMINER

LY, ANH VU H

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 01/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/668,243

Applicant(s)

LU ET AL.

Examiner

Anh-Vu H Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,3-10,16-18,21,23-26,31 and 32 is/are rejected.
7) ☒ Claim(s) 2,11-15,19,20,22,27-30 and 33 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This communication is in response to applicant's amendment filed September 07, 2004.
Claims 1-33 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 16-18, 21, 31, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al (US Pub No. 2002/0036993 A1). Hereinafter, referred to as Park.

With respect to claims 1, 16, 21, and 31, Park discloses (38th –39th paragraphs) that first the receiver performs error checking (processing multimedia data to determine if multimedia data is properly received), that is the receiver checks a first CRC 640 on a DeMux sub-layer (herein, the DeMux sub-layer is an interface for connecting the RLP layer to the physical layer, therefore it is considered as part of RLP layer by the examiner, 8th paragraph) and when there is some error, the previous frame is discarded. If there is no error, a second CRC 660 is checked, if the receiver checks the second CRC 660 on the DeMux sub-layer and when there is no error, data is transmitted to an upper layer, but if there is some error, a blank data block (erasure data frame) is transmitted to the upper layer (herein, the upper layers including the PPP, TCP, UDP

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layers for IP-Wireless as in CDMA 2000) (forwarding erasure data frames with said multimedia data to a PPP layer).

With respect to claims 3, 17-18, and 32, Park discloses (39th paragraph) that a blank data block is transmitted to the upper layer (step of representing erasure data frames in a predefined form).

3. Claims 1, 3-4, 7, 10, 16-18, 21, 23, 26, 31, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Ludwig et al (US Pub No. 2004/0039833 A1). Hereinafter, referred to as Ludwig.

With respect to claims 1, 16, 21, and 31, Ludwig discloses (81th paragraph) that the RLP receiver separates the packets of the unnumbered mode and numbered mode into respective and distinct buffers. Like the RLP sender, the RLP receiver always analyses the data in each buffer to thereby discriminate higher layer frames (processing multimedia data to determine if multimedia data is properly received). The RLP receiver is adapted to employ a fixed buffer limit of packets of the unnumbered mode, beyond which packets of the unnumbered mode will be released to the next higher layer regardless if a delimiter has been received or not. Herein, as illustrated in Fig. 6, the next higher layer is PPP layer, TCP or UDP, etc ... (forwarding erasure data frames with multimedia data to a PPP layer).

With respect to claim 3, Ludwig discloses (81th paragraph) that packets are released to the next higher layer regardless if a delimiter has been received or not. Herein, packets without

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delimiters (erasure data frames) are considered as a predefined form by the examiner (representing erasure data frames in a predefined form).

With respect to claims 4, 10, and 26, Ludwig discloses (81th paragraph) that packets are released to the next higher layer regardless if a delimiter has been received or not. Herein, the packets are not modified before releasing to the next higher layer (predefined form is the original received data frames).

With respect to claims 7 and 23, Ludwig discloses (59th paragraph) that the protocol of layer n is PPP and the protocol of layer (n+1) is an appropriate higher layer protocol such as one of the protocols shown in Fig. 5. Therefore, steps described above (81th paragraph) could be implement by the PPP layer, its lower layer, and its next higher layer (receiving erasure data frames with multimedia data from PPP layer and replacing erasure data frames with a predefined binary value).

With respect to claims 17-18 and 32, Ludwig discloses in Fig. 5, the next higher layer is PPP layer, TCP, UDP, etc ... (RLP layer forwards an erasure data frame to set of interface layers).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-6, 8-9, and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig et al (US Pub No. 2004/0039833 A1).

With respect to claims 5-6, 8-9, and 24-25, Ludwig discloses in (81th paragraph) that packets with missing delimiters are released to the next higher layer (herein, packets without delimiters are considered as a predefined form by the examiner). Ludwig does not disclose the predefined forms are either binary pattern comprised of all ones and/or all zeroes. However, it is known in data communication systems that certain patterns are used to replace a portion of the packet or the whole packet to distinguish among the packets such as the used of bit/stuffing, etc... Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the feature of representing the predefined form as either all ones and/or zeros in Ludwig's system, to distinguish what being carried in the packets.

Allowable Subject Matter

5. Claims 2, 11-15, 19-20, 22, 27-30, and 33 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed September 07, 2004 have been fully considered but they are not persuasive.

Applicant argues on page 3 that Park does not disclose or suggest forwarding erasure data frames with multimedia data to a PPP layer; replacing erasure data frame with a predefined binary value; or processing multimedia data to determine if multimedia data is properly received; and communicating error information between the RLP and UDP layers, as recited in independent claims. Examiner respectfully disagrees. Park discloses (38th–39th paragraphs) that first the receiver performs error checking (processing multimedia data to determine if multimedia data is properly received), that is the receiver checks a first CRC 640 on a DeMux sub-layer (herein, the DeMux sub-layer is an interface for connecting the RLP layer to the physical layer, therefore it is considered as part of RLP layer by the examiner, 8th paragraph) and when there is some error, the previous frame is discarded. If there is no error, a second CRC 660 is checked, if the receiver checks the second CRC 660 on the DeMux sub-layer and when there is no error, data is transmitted to an upper layer, but if there is some error, a blank data block (erasure data frames are replaced with predefined binary value) is transmitted to the upper layer. Herein, the data includes the multimedia data and blank data block (forwarding erasure data frames with said multimedia data to a PPP layer). Herein, the upper layers including the PPP, TCP, UDP layers for IP-Wireless as in CDMA 2000 (communicating error information between the RCL and higher layers)

Applicant further argues on page 3 that according to Ludwig, the PPP level packet or frame does not include the start flag or the stop flag. Examiner respectfully disagrees. Ludwig discloses on page 8, 82nd paragraph, that the RLP sender will also look for the delimiters (start or end flag) of the next higher layer, e.g., PPP. This implies that the PPP packet does include the delimiters (start or end flag). Further, as considered by the examiner, erasure data frames are

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data frames with missing bits or corrupted bits. Ludwig discloses (81th paragraph) that the RLP receiver is adapted to employ a fixed buffer limit of packets of the unnumbered mode, beyond which packets of the unnumbered mode will be released to the next higher layer regardless if a delimiter has been received or not (forwarding erasure data frames with multimedia data to PPP layer). Applicant further argues on page 3 that Ludwig does not disclose suggest replacing erasure data frames with a predefined binary value or processing multimedia data to determine if multimedia data is properly received; and communicating error information between RLP and UDP layers. Examiner respectfully disagrees. As stated in the rejections of claims 1, 7, 16, 21, 23, and 31, Ludwig discloses all of the claimed limitations.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Strawczynski et al (US Patent No. 6,148,422) discloses telecommunication network utilizing an error control protocol.

Ramchandran et al (US Patent No. 6,418,549 B1) discloses data transmission using arithmetic coding based continuous error detection.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 571-272-3175. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

avl


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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2667 1/3/05